

6,067,451

19

tion transmission network to identify the identification number of the RF receiver in the RF information transmission network, or by a gateway switch in the electronic mail system or the interface switch between the electronic mail system and the RF information transmission network.

The intelligence for determining the identification number of the RF receiver to receive the information is less expensive and operates most efficiently when placed within the interface switch where the aforementioned matching may be produced without requiring modification of either individual originating processors within the electronic mail system or gateway switches within the electronic mail system which have additional functions for supporting other conventional aspects of electronic mail. However, the determination of an identification number of the RF receiver which transfer the information to the destination processor may be located anywhere between the originating processor and the RF information transmission network for practicing the present invention. Similarly, the appending of the address of the interface switch to which the information is transmitted by the electronic mail system for entry into the RF information transmission network for broadcast to the RF receiver for transfer to the destination processor may be located within any one of the originating processor, gateway switch or interface switch.

An electronic mail system for transmitting information from one of a plurality of originating processors to at least one of a plurality of destination processors in accordance with the invention includes at least one gateway switch, a gateway switch storing information received from one of the at least one originating processor prior to transmission of the information to the at least one destination processor; an RF information transmission network for transmitting stored information received from one of the at least one gateway switch by RF transmission to at least one destination processor; at least one interface switch, an interface switch connecting a gateway switch to the RF information transmission network and transmitting stored information received from one of the at least one gateway switch to the RF information transmission network; and wherein the information is transmitted to a receiving interface switch by the electronic mail system in response to an address of the receiving interface switch which has been added to the information originated by the originating processor by either the originating processor or gateway switch and the information is transmitted from the receiving interface switch to the RF information transmission network with an address of the destination processor to receive the information which has been added by either the originating processor, a gateway switch or the receiving interface switch. The destination processors may be transported during operation by a user. The receiving interface switch removes information added by the electronic mail system to the information originated by the originating processor from the stored information received from one of the at least one gateway switch and adds information used by the RF information transmission network during transmission of the information to the information originated by the originating processor to an RF receiver in the RF information transmission network which receives the information and transfer the information originated by the originating processor to the destination processor. The RF receiver may be detached from the destination processor during reception of the information with a memory of the RF receiver storing the information. Storage in memory permits review of the information prior to transferring the information to the destination processor by connection the RF receiver to the destination processor. The

20

address of the destination processor is preferably an identification of a RF receiver in the RF information transmission network which receives the information and transfers it to the destination processor.

The receiving interface switch stores information which has been stored by at least one gateway switch that is received from a plurality of originating processors, assembles the information from a plurality of originating processors into a packet and transmits the packet to the RF information transmission network. The RF information transmission network comprises a switch which receives the packet from the receiving interface switch and disassembles the packet into information from the plurality of originating processors. The RF information transmission network transmits the disassembled information, including the identification number of the RF receiver, to a switch in the RF information transmission network storing a file identified by the identification number and any destination of the RF receiver in the RF information transmission network to which the information and identification number is to be transmitted by the RF information transmission network. The switch adds any destination of the RF receiver to the information and the RF information transmission network in response to any added destination transmits the information and identification number to the destination for RF broadcast to the RF receiver for relaying to the destination processor.

The electronic mail system also transmits information between an originating processor and at least one destination processor through either a public switch or a private switch telephone network without transmission by the RF information transmission network. The destination processor is addressed by a different address during transmission to the destination processor when using the public or private switch telephone network than during transmission by the RF information transmission network.

The RF receiver is connectable to the destination processor and in response to connection of the RF receiver to the destination processor the RF receiver transfers information stored in a memory of the RF receiver received from the originating processor to the destination processor. The number of originating processors is greater than a number of interface switches. The plurality of originating processors also function as destination processors with a RF receiver coupled thereto.

The address of the receiving interface switch may be added to the information originated by the originating processor by a gateway switch. The address of the receiving interface switch may be added by the gateway switch by matching an identification of the destination processor such as a name of a user of the destination processor with a stored identification of a destination processor and adding an address of an interface switch stored with the matched identification of the destination processor to the information as the address of the receiving interface switch.

The address of the receiving interface switch may also be added by the originating processor. The address of the receiving interface switch may be added by an inputting of the address of the receiving interface switch along with an identification of the destination processor by an operator or a machine using the originating processor or by matching an identification of the destination processor, such as the name of the user, with a stored identification of a destination processor and adding an address of an interface switch stored with the matched identification of the destination processor to the information as the address of the receiving interface switch.

6,067,451

21

The address of the destination processor, which preferably is an identification number of a RF receiver receiving the information and transferring the information to the destination processor, may be added to the information originated by the originating processor by an operator or a machine using the originating processor. The identification number may also be added to the information originated by the originating processor by matching an identification of the destination processor, such as a user of the destination processor, with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

The address of the destination processor may also be added to the information originated by the originating processor by the gateway switch. The identification number may be added by the gateway switch by matching an identification of the destination processor, such as a name of a user of the destination processor, with a stored identification of a destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

The address of the destination processor may also be added to the information originated by the originating processor by the receiving interface switch. The identification number may be added by the receiving interface switch to the information originated by the originating processor by matching an identification of the destination processor, such as a name of a user of a destination processor, with a stored identification of the destination processor and adding an identification number stored with the matched identification of the destination processor to the information as the identification number.

#### BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 illustrates a prior art electronic mail system.

FIG. 2 illustrates a prior art paging system used by the present invention.

FIG. 3 illustrates a memory map of the local switch of the prior art paging system of FIG. 2.

FIG. 4 illustrates a memory map of a lata switch of the prior art paging system of FIG. 2.

FIG. 5 illustrates a memory map of a hub switch of the prior art paging system of FIG. 2.

FIG. 6 illustrates a message format utilized by the prior art paging system of FIG. 2.

FIG. 7 illustrates a prior art connection between a receiver in the paging system of FIG. 2 and a printer.

FIG. 8 illustrates a block diagram of a system in accordance with the present invention.

FIG. 9 illustrates a block diagram of the connection of a plurality of electronic mail systems through a plurality of interface switches to an input port of an RF information transmission network utilized by the present invention.

FIG. 10 illustrates a block diagram of the transmission of information originating from a plurality of electronic mail systems to an RF information transmission network to a plurality of destination processors and originating processors within a plurality of electronic mail systems in accordance with the present invention.

FIG. 11 illustrates possible distributed functions for performing data processing steps necessary to transmit information from an originating processor to a destination processor using RF transmission in accordance with the present invention.

22

FIG. 12 is a block diagram of an interface switch in accordance with the present invention.

#### BEST MODE FOR CARRYING OUT THE INVENTION

FIGS. 8-10 illustrate a block diagram of an electronic mail system 100 which has been integrated with an RF information transmission network 302 for transmitting information from an originating processor within the electronic mail system to a destination processor within the electronic mail system utilizing RF communications in accordance with the present invention. Like reference numerals identify like parts in FIGS. 1-10 and 12. The integrated system 100 differs from the prior art of FIGS. 1-7 in that the originating processor, which may be any of the processors within computing systems #1-#N is provided the option of transmitting electronic mail (information) to at least one destination processor which may be any processor A-N within the processing systems #1-#N by means of an RF information transmission network 302 as described below. It should be understood that the present invention is not limited to the block diagram form of FIGS. 8-10 and 12. Additionally, the communications between the originating processors, gateway switches 14 and destination processors may be through either a public or private switch telephone network 314 and are not limited to any type of telephone system interconnection. The RF information transmission network 302 functions to transmit the information which originated from one of the originating processors A-N within any of the computing systems #1-#N to the destination processor A-N within any of the computing systems #1-#N by an RF transmission to an RF receiver 119. The RF receiver 119 is connected to the destination processor with the same connections as illustrated in the prior art of FIG. 7. When the RF receiver is connected to the SAFARI™ computer, the connection is powered by the SAFARI computer. Upon connection, the receiver 119 relays the information from the RF receiver to the destination processor. An important aspect of the present invention is that reception and review of electronic mail can be performed without connection of the RF receiver 119 to the destination processor A-N which permits the receiver to function as a mobile electronic mail receiver. As a result, the user may move from the site of the destination processor A-N either within an office or other location or during travel while receiving electronic mail which was not possible with the prior art. Furthermore, the connection of the RF receiver 119 to the destination processor automatically transfers the electronic mail stored within the memory of the RF receiver to the destination processor without manual keyboarding. A computer program for controlling the transfer of information from the receiver 119 to a SAFARI™ laptop computer of AT&T Corporation is contained within the attached Appendix at pages 1-9. This program automatically provides transfer of the stored electronic mail stored within the memory of the RF receiver 119 into the destination processor A-N where it is accessible to application programs within the destination processor. As a result, the deficiencies of the prior art in requiring substantial expense consequent from the making of telephone calls, substantial labor resultant from the lost time of persons making telephone calls and the inability to deliver electronic mail messages and the more difficult problem of delivering electronic mail messages to portable processors is overcome. Moreover, as is explained in detail below in conjunction with FIG. 11, the initiation of an information transmission from an originating processor A-N to a destination processor A-N using an RF

6,067,451

23

transmission by the RF information transmission network 302 to an individual RF receiver has many different options which are user friendly. The initiation of the transmission of information from an originating processor A-N to a destination processor A-N using RF Transmission by the RF information transmission network 302 only requires the identification of an address of the RF receiver, which preferably is the identification number of the receiver 119 in the RF information transmission network and the designation of an address of an interface switch in the form of an address such a "TF MOBOX" which connects the electronic mail system to the RF information transmission network as described below in conjunction with FIGS. 9 and 10. The initiator of an electronic mail message, in the most user friendly form of the invention, is only required to input into the originating processor A-N an identification of the destination processor A-N which typically is in the form of a name such as "John Doe". The distributed intelligence of the system implementing the present invention, which may be located in any one of the originating processors A-N, gateway switch 14 or interface switch 304 or distributed therebetween as described below with reference to FIG. 11, may be used to add the necessary address of the interface switch connecting the electronic mail system 1-N to the RF information transmission network 302 and the identification of the RF receiver 119 in the RF information transmission network from the inputting of only an identification of the destination processor A-N. The addition of the identification number of the RF receiver 119 and the address of the interface switch may be implemented by the originating processor A-N of one of the computing systems #1-#N, a gateway switch 14 or an interface switch 304 as described below with reference to FIG. 9.

FIG. 9 illustrates a block diagram of the connection between a plurality of gateway switches with mailboxes 14 in different electronic mail systems to the RF information transmission network 302. It should be understood that multiple gateway switches with mailboxes 14 from a single electronic mail system 1-N may be connected to each interface switch 304 instead of the connection of a single gateway switch with mailbox to a single interface switch as illustrated. A plurality of interface switches 304 connect information transmitted from at least one electronic mail system as illustrated in FIG. 8. Optionally, a plurality of electronic mail systems 1-N each as illustrated in FIG. 8 are connected to a data input port of the RF information transmission system which is preferably hub switch 116 of the prior art paging network described above with reference to FIGS. 2-6. The dotted line communication paths 306 illustrate optional information transmissions in which information from a plurality of different electronic mail systems is concentrated at a single interface switch 304. The dotted line communication paths 307 illustrate connections to additional gateway switches with mailboxes 14 within electronic mail systems 1-N.

The function of the interface switches 304 is twofold. In the first place, the interface switches 304 function as a security check to determine that information transmissions originating from a gateway switch with mailbox 14 represent transmissions which should be coupled to a hub switch 116 of the RF information transmission network 302. The security check is performed by the interface switch 304 comparing the identification number of the RF receiver 119 which has been added by either an originating processor A-N or a gateway switch with mailboxes 14 with permissible identification numbers or the interface switch performing the addition of the identification number. The interface

24

switch 304 also removes information added by the electronic mail system 1-N to the information originated by the originating processor A-N from the stored information received from one of the gateway switches 14 and adds information used by the RF information transmission network 302 during transmission of the information originated at the originating processor to a RF receiver 119 in the RF information transmission network 302 which receives the information and transfer it to the destination processor A-N. Additionally, the interface switch 304 encodes data, which is required to format the display of the CRT of the destination processor for the electronic mail system to which the destination processor is connected, in the form of a character or characters which are decoded by either the RF receiver 119 or the destination processor A-N and added in decoded form back to the information which is processed by the destination processor with a format of the electronic mail system to which the destination processor A-N is connected.

The interface switches 304 function to store information which has been stored by at least one gateway switch 114 that is received from a plurality originating processors, assemble the information from a plurality of originating processors into a packet preferably having the format of that described above with reference to the prior art in FIG. 6 and transmit the packet to the hub switch 116 within the RF information transmission network 302. While the invention is not limited to the transmission of the packets from the interface switch 304 to the hub switch 116 of the RF information transmission system 302, the hub switch is the preferable node in the RF information transmission network to which communications from the gateway switches 14 should be transmitted as a consequence of it having jurisdiction over both data switches 114 and the local switches 112 in the RF information transmission network which results in lesser network overhead.

The hub switch 116 receives the packet from the receiving interface switch 304 and disassembles the packet into information from the plurality of originating processors either within a single electronic mail system such as system 1 or from a plurality of electronic mail systems, such as systems 1-N, or from outside of any electronic mail system from at least one additional processor 312 which is connected directly to interface switch 304 to originate information to be transmitted to a destination processor A-N in an electronic mail system as described below. The RF information transmission network 302 transmits the disassembled information from the hub switch 116 including the identification number of the RF receiver 119 transferring information to the destination processor A-N to a local switch 112 storing the file 154 identified by the identification number and any destination 178 of the RF receiver in the RF information transmission network to which the information and identification number is to be transmitted by the RF information transmission network and adds any destination of the RF receiver to the information in accordance with the prior art system described above with reference to FIGS. 2-6. The RF information transmission network in response to any added destination transmits the information and identification number to the destination in accordance with the prior art system described above with reference to FIGS. 2-6 for RF broadcast to the RF receiver 119 for transfer to the destination processor A-N.

The information is transmitted to a receiving interface switch 304 from one or more gateway switches 14 by one or more electronic mail systems 1-N in response to an address of the receiving interface switch which has been added to the information originated by the originating processor by either



6,067,451

25

the originating processor or gateway switch. The information is transmitted from the receiving interface switch 304 to the RF information transmission network with an address of the destination processor, such as a name of a user of the destination processor A-N, to receive the information which has been added by either the originating processor A-N, a gateway switch 14 or the receiving interface switch 304.

Various options exist for the adding of the address of the receiving interface switch and address of the destination processor. Preferably, the address of the receiving interface switch is a word, such as "TF-MOBOX", which is recognized throughout the electronic mail system when appended to information as directing the information to be transmitted to the interface switch 304. The address of the destination processor is preferably the identification number of the RF receiver 119 within the RF information transmission network 302. The address of the receiving interface switch may be added to the information originated by the originating processor, by a gateway switch 14 or by the originating processor A-N. The address of the receiving interface switch 304 may be added to the information by matching an identification of the destination processor A-N which may be the name of the individual utilizing the processor or some other information and adds an address of an interface switch such as the aforementioned "TF-MOBOX" stored with the matched identification of the destination processor to the information as the address of the receiving interface switch. Alternatively, the originating processor may be used to add the address of the receiving interface switch 14 by an inputting of the address of the receiving interface switch (TF-MOBOX) along with an identification of the destination processor A-N (name of recipient using the processor). The originating processor A-N may also add the address of the receiving interface switch 304 by matching an identification of the destination processor (name of the user of the processor) with a stored identification of a destination processor and adding an address of the interface switch (TF-MOBOX) stored with the matched identification of the destination processor to the information as the address of the receiving interface switch. The identification number may be added to the information originated by the originating processor or, alternatively, maybe added by the originating processor by matching an identification of the destination processor (the name of the user of the processor) with a stored identification of a destination processor (the authorized user of the destination processor) and adding an identification number stored with the matched identification of the destination processor to the information as the identification number of the RF receiver 119. Alternatively, the aforementioned matching process may be performed by either the gateway switch 14 or the interface switch 304.

The at least one additional processor 312, originates information from outside of any electronic mail system. The processors 312 provide an address of at least one destination processor in an electronic mail system, such as the name of the user, to receive information transmitted by the RF information transmission system 302 or an identification number of the RF receiver 119 receiving information and transferring the information to the destination processor. The interface switch 304 which receives the information from each processor 312 adds information used by the RF information transmission network 302 during transmission of the information to the RF receiver 119 receiving the information in the same manner as described above with respect to the interface switch 304.

The advantage of connecting the processors 312 directly to the interface switch 304 is that the processors 312 are only

26

required to have a telephone modem and support programming to format information for RF transmission to a destination processor A-N within any one of one or more electronic mail systems 1-N. The processors 312 are not required to have the necessary electronic mail system software present in originating processors A-N or interconnections with an electronic mail system. As a result of the connection to the interface switch 304, information originating from the additional processors 312 may be transmitted by RF transmission to a destination processor A-N within any one or a plurality of electronic mail systems with the user of the processor 312 or the processor 312 or the interface switch 304 only having to supply an identification number of the receiver 119 to input information into the RF information transmission system 302 for RF transmission to a destination processor.

The difference between originating information by one of the additional processors 312 outside of any electronic mail system and originating information by one of the processors within one of the electronic mail systems is that the direct connection of the additional processor to the interface switch 304 eliminates the requirement for the adding of an address of the interface switch 304 which is required by the electronic mail systems to forward the information to the interface switch where necessary formatting of the information to be compatible with the RF information transmission system is performed. The interface switch 304 packetizes information originating from the additional processors 312 in the same manner as described above with respect to information originating from within an electronic mail system. Information from within an electronic mail system and originating from additional processors 312 outside of the electronic mail system may be formatted into the same packets which are forwarded to the hub switch 116. Additionally, an interface switch 304 may be connected only to the additional processors 312 to provide an interface only for processors outside of any electronic mail system to destination processors A-N within one or more electronic mail systems 1-N. The only information which is necessary to be inputted by the additional processors 312 is the address of the destination processor (user of the processor). The addition of the identification number of the receiver 119 may be added by matching of an identification of the destination processor with stored destination processors within the additional processor 312 or the interface switch 304 with an identification number of the receiver 119 stored with an identification of a destination processor A-N used as an identification of the destination processor upon a match having been made.

FIG. 11 summarizes electronic mail message entry methods for messages (information) originating from originating processors within an electronic mail system. The first entry method adds the address of the interface switch 304 and the destination processor preferably in the form of a user's name; the gateway switch 14 takes no action; and the interface switch 304 adds the identification number of the RF receiver 119. The second entry method adds the address of the interface switch 304 and the identification number of the receiver 119; the gateway switch 14 takes no action; and the interface switch 304 performs only the function of verifying that the identification number which was added by the originating processor is a valid identification number within the RF information transmission network 302. In the third method, the originating processor adds the destination processor preferably in the form of the user's name; the gateway switch adds the destination of the interface switch 304; and the interface switch 304 adds the identification of

6,067,451

27

the receiver 119. In the fourth method, the originating processor adds the destination processor preferably in the form of the user's name only; the gateway switch 14 adds an address of the interface switch 304 and the identification number of the receiver 119; and the interface switch takes no action other than verification that the identification number of the receiver 119 added by the gateway switch 14 is valid. In the fifth method, the operator of the originating processor adds the destination processor, points to an icon displayed on a CRT associated with the originating processor and the originating processor adds the address of the interface switch 304; the gateway switch 14 adds the identification number of the receiver 119 and the interface switch 304 takes no action other than verification. In the sixth method, the operator of the originating processor adds the destination processor, the user of the originating processor points to an icon displayed by a CRT associated with the originating processor which causes the addition of the address of the interface switch 304; the gateway switch takes no action and the interface switch 304 adds the identification of the receiver 119. In the seventh method, the operator of the originating processor adds the destination processor, the user points to an icon displayed on a CRT associated with the originating processor causing the addition of the address of the interface switch 304 and the receiver identification number by comparing an identification of the destination processor, such as user name of the destination processor, to an identification of destination processors with identification numbers or RF receivers 119 which transfer information to the destination processor; the gateway switch 14 takes no action; and the interface switch 304 takes no action.

FIG. 12 illustrates a block diagram of an interface switch 304 in accordance with the present invention. The interface switch 304 has a main CPU 400 to which is connected a floppy drive 402 and a hard drive 404 for providing memory storage for use by the CPU in executing the various functions of the interface switch as described above. The program on pages 10-12 of the Appendix implements the function of the interfaced switch 304 in a 3B2 computer which interfaces with the Telefind Corporation data transmission network described in the above-referenced patents and the AT&T Corporation electronic mail system. A diagnostic and maintenance port 406 is connected to the CPU in accordance with standard practice. A main bus 408 is coupled to a plurality of serial ports 410 which are connected in series with a multispeed modem 412 which is connected to one of the additional processors 312 as discussed above with reference to FIG. 9, to at least one gateway switch with mailboxes 14 in at least one electronic mail system and to a plurality of network ports which are connected to a plurality of X.25 modems 414 which are connected in series with a network port 416 which is connected to hub switch 116 of FIG. 9. A module bay controller 418 controls the bus 408 in accordance with standard practice. Alternatively, if the interface switch is not connected to a gateway switch with mailboxes 14, the interface switch functions only as a general purpose collector switch for the additional processors 312.

While the invention has been described in terms of its preferred embodiments, it should be understood that numerous modifications may be made thereto without departing from the spirit and scope as defined in the appended claims. For example, while the invention has been described in terms of utilizing a preferred RF information transmission network, it should be understood that the invention is equally applicable to other forms of RF transmission systems for broadcasting information originating from an origi-

28

nating processor within an electronic mail system or from an additional processor outside of any electronic mail system to a destination processor connected to an electronic mail system. It is intended that all such modifications fall within the scope of the appended claims.

What is claimed is:

1. In a system comprising a communication system which transmits electronic mail, inputted to the communication system from a plurality of processors, and a RF system having a plurality of RF receivers which receive broadcasts from at least one broadcast location, the broadcast including information contained within the electronic mail and an identification of each RF receiver to receive the broadcast, an interface comprising:

at least one input which receives at least the information contained within the electronic mail;

at least one output which outputs a processed output, the processed output including the information contained within the electronic mail and an identification of each RF receiver which is to receive the broadcast of the information; and

a processor, coupled to the at least one input and to the at least one output, which processes at least the information contained within the electronic mail to produce the processed output outputted by the at least one output.

2. An interface in accordance with claim 1 wherein:

the system comprises another communication system which transmits other information to be transmitted to the RF receivers;

the at least one input receives the other information from the another communication system; and

the at least one output outputs the processed output which contains the other information and an identification of each RF receiver which is to receive broadcasts from the at least one broadcast location including the other information and the identification of each RF receiver to receive the broadcasts.

3. An interface in accordance with claim 2 wherein:

the processing adds the identification of each RF receiver which is to receive the broadcasts of the information in producing the processed output containing the identification of each RF receiver and the information; and the processing adds the identification of each RF receiver which is to receive the broadcasts of the other information in producing the processed output containing the identification of each RF receiver and the other information.

4. An interface in accordance with claim 2 wherein:

the at least one input receives electronic mail addressed to the interface including the identification of each RF receiver and the information to be broadcast to each RF receiver; and

the at least one input receives information transmissions containing the identification of each RF receiver and the other information to be broadcast to each RF receiver.

5. An interface in accordance with claim 2 wherein:

the processing processes at least the information contained in the electronic mail to produce the processed output.

6. An interface in accordance with claim 5 wherein:

the processing deletes information from the electronic mail with the processed output not containing the deleted information.

7. An interface in accordance with claim 6 wherein:

6,067,451

29

the processing deletes a header from the electronic mail with the processed output not containing the deleted header.

8. An interface in accordance with claim 5 wherein:

the processing adds additional information to the information contained in the electronic mail and the identification of each RF receiver to receive information contained in electronic mail with the processed output containing the added information.

9. An interface in accordance with claim 8 wherein:

the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

10. An interface in accordance with claim 9 wherein:

the added information comprises a packet containing the destination to which the processed output is transmitted within the RF system to where broadcast occurs.

11. An interface in accordance with claim 10 wherein:

the packet also contains a destination of a switch in the RF system to which at least part of the packet is transmitted by the RF system.

12. An interface in accordance with claim 2 wherein:

the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for transmission and broadcast by the RF system.

13. An interface in accordance with claim 12 wherein:

the security check is performed by a comparison of an identification of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of the receiver which is to receive the information matches one of the RF receivers in the RF system.

14. An interface in accordance with claim 1 wherein:

the system comprises a plurality of communication systems and the RF system;

the at least one input receives at least the information contained in the electronic mail from the plurality of communication systems;

the processed output comprises the information received from the plurality of communication systems and an identification of each RF receiver to receive the broadcasts; and

the processor processes at least the information received by the at least one input from the plurality of communication systems to produce the processed output.

15. An interface in accordance with claim 14 wherein:

the processing adds the identification of each RF receiver which is to receive the broadcasts in producing the processed output.

16. An interface in accordance with claim 14 wherein:

the at least one input receives electronic mail addressed to the interface including the identification of each RF receiver and the information to be broadcast to each RF receiver.

17. An interface in accordance with claim 14 wherein:

the processing processes at least the information contained in the electronic mail to produce the processed output.

18. An interface in accordance with claim 17 wherein:

the processing deletes information from the electronic mail with the processed output not containing the deleted information.

30

19. An interface in accordance with claim 18 wherein:

the processing deletes a header from the electronic mail with the processed output not containing the deleted header.

20. An interface in accordance with claim 17 wherein:

the processing adds additional information to the information contained in the electronic mail and the identification of each RF receiver to receive information contained in electronic mail with the processed output containing the added information.

21. An interface in accordance with claim 20 wherein:

the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

22. An interface in accordance with claim 21 wherein:

the added information comprises a packet containing the destination to which the processed output is transmitted within the RF system to where the broadcast occurs.

23. An interface in accordance with claim 22 wherein:

the packet also contains a destination of a switch in the RF system to which at least part of the packet is transmitted by the RF system.

24. An interface in accordance with claim 14 wherein:

the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for Transmission and broadcast by the RF system.

25. An interface in accordance with claim 24 wherein:

the security check is performed by a comparison of an identification of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification number of the receiver which is to receive the information matches one of the RF receivers in the RF system.

26. An interface in accordance with claim 1 wherein:

the system comprises a plurality of communication systems and a plurality of RF systems each containing a plurality of RF receivers;

the at least one input receives at least the information contained in the electronic mail from the plurality of communication systems;

the processed output comprises the information and an identification of each RF receiver to receive the broadcasts; and

the processor processes at least the information received by the at least one input to produce the processed output.

27. An interface in accordance with claim 26 wherein:

the processing adds the identification of each RF receiver which is to receive the broadcasts in producing the processed output.

28. An interface in accordance with claim 26 wherein:

the at least one input receives electronic mail addressed to the interface including the identification of each RF receiver and the information to be broadcast to each RF receiver.

29. An interface in accordance with claim 26 wherein:

the processing processes at least the information contained in the electronic mail to produce the processed output.

30. An interface in accordance with claim 29 wherein:

6,067,451

31

the processing deletes information from the electronic mail with the processed output not containing the deleted information.

31. An interface in accordance with claim 30 wherein: the processing deletes a header from the electronic mail with the processed output not containing the deleted header.

32. An interface in accordance with claim 29 wherein: the processing adds additional information to the information contained in the electronic mail and the identification of each RF receiver to receive information contained in electronic mail with the processed output containing the added information.

33. An interface in accordance with claim 32 wherein: the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

34. An interface in accordance with claim 33 wherein: the added information comprises a packet containing the destination to which the processed output is transmitted within the RF system where the broadcast occurs.

35. An interface in accordance with claim 34 wherein: the packet also contains a destination of a switch in the RF system to which at least part of the packet is transmitted by the RF system.

36. An interface in accordance with claim 26 wherein: the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for transmission and broadcast by the RF system.

37. An interface in accordance with claim 36 wherein: the security check is performed by a comparison of an identification of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of the receiver which is to receive the information matches one of the RF receivers in the RF system.

38. An interface in accordance with claim 1 wherein: the processing adds the identification of each RF receiver which is to receive the broadcasts to produce the processed output.

39. An interface in accordance with claim 38 wherein: the processing processes at least the information contained in the electronic mail to produce the processed output.

40. An interface in accordance with claim 39 wherein: the processing deletes information from the electronic mail with the processed output not containing the deleted information.

41. An interface in accordance with claim 40 wherein: the processing deletes a header from the electronic mail with the processed output not containing the deleted header.

42. An interface in accordance with claim 39 wherein: the processing adds additional information to the information contained in the electronic mail and the identification of each RF receiver to receive information contained in electronic mail with the processed output containing the added information.

43. An interface in accordance with claim 42 wherein: the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

32

44. An interface in accordance with claim 43 wherein: the added information comprises a packet containing a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

45. An interface in accordance with claim 44 wherein: the packet also contains a destination of a switch in the RF system to which at least part of the packet is transmitted by the RF system.

46. An interface in accordance with claim 38 wherein: the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for transmission and broadcast by the RF system.

47. An interface in accordance with claim 46 wherein: the security check is performed by a comparison of an identification of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of the receiver which is to receive the information matches one of the RF receivers in the RF system.

48. An interface in accordance with claim 1 wherein: the at least one input receives electronic mail addressed to the interface including the identification of each RF receiver which is to receive the broadcasts of the information and the information to be broadcast to each RF receiver.

49. An interface in accordance with claim 48 wherein: the processing processes at least the information contained in the electronic mail to produce the processed output.

50. An interface in accordance with claim 49 wherein: the processing deletes information from the electronic mail with the processed output not containing the deleted information.

51. An interface in accordance with claim 50 wherein: the processing deletes a header from the electronic mail with the processed output not containing the deleted header.

52. An interface in accordance with claim 49 wherein: the processing adds additional information to the information contained in the electronic mail and the identification of each RF receiver to receive information contained in electronic mail with the processed output containing the added information.

53. An interface in accordance with claim 52 wherein: the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

54. An interface in accordance with claim 53 wherein: the added information comprises a packet containing the destination to which the processed output is transmitted within the RF system where broadcast occurs.

55. An interface in accordance with claim 54 wherein: the packet also contains a destination of a switch in the RF system to which at least part of the packet is transmitted by the RF system.

56. An interface in accordance with claim 48 wherein: the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for transmission and broadcast by the RF system.



6,067,451

33

57. An interface in accordance with claim 56 wherein: the security check is performed by a comparison of an identification of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification number of the receiver which is to receive the information matches one of the RF receivers in the RF system.
58. An interface in accordance with claim 1 wherein: the processing processes at least the information contained in the electronic mail to produce the processed output.
59. An interface in accordance with claim 58 wherein: the processing deletes information from the electronic mail with the processed output not containing the deleted information.
60. An interface in accordance with claim 59 wherein: the processing deletes a header from the electronic mail with the processed output not containing the deleted header.
61. An interface in accordance with claim 59 wherein: the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for transmission and broadcast by the RF system.
62. An interface in accordance with claim 61 wherein: the security check is performed by a comparison of an identification of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification number of the receiver which is to receive the information matches one of the RF receivers in the RF system.
63. An interface in accordance with claim 60 wherein: the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for transmission and broadcast by the RF system.
64. An interface in accordance with claim 63 wherein: the security check is performed by a comparison of an identification of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of the receiver which is to receive the information matches one of the RF receiver in the RF system.
65. An interface in accordance with claim 58 wherein: the processing adds additional information to the information contained in the electronic mail and the identification of each RF receiver to receive information contained in electronic mail with the processed output containing the added information.
66. An interface in accordance with claim 65 wherein: the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.
67. An interface in accordance with claim 66 wherein: the added information comprises a packet containing the destination to which the processed output is transmitted within the RF system to where broadcast occurs.

34

68. An interface in accordance with claim 67 wherein: the packet also contains a destination of a switch in the RF system to which at least part of the packet is transmitted by the RF system.
69. An interface in accordance with claim 65 wherein: the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for transmission and broadcast by the RF system.
70. An interface in accordance with claim 69 wherein: the security check is performed by a comparison of an identification of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of the receiver which is to receive the information matches one of the RF receivers in the RF system.
71. An interface in accordance with claim 66 wherein: the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for transmission and broadcast by the RF system.
72. An interface in accordance with claim 71 wherein: the security check is performed by a comparison of an identification of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of the receiver which is to receive the information matches one of the RF receiver in the RF system.
73. An interface in accordance with claim 67 wherein: the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for transmission and broadcast by the RF system.
74. An interface in accordance with claim 73 wherein: the security check is performed by a comparison of an identification of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of the receiver which is to receive the information matches one of the RF receivers in the RF system.
75. An interface in accordance with claim 68 wherein: the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for transmission and broadcast by the RF system.
76. An interface in accordance with claim 75 wherein: the security check is performed by a comparison of an identification number of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of the receiver which is to receive the information matches one of the RF receiver in the RF system.
77. An interface in accordance with claim 58 wherein:



6,067,451

35

the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for transmission and broadcast by the RF system.

78. An interface in accordance with claim 77 wherein: the security check is performed by a comparison of an identification of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of the receiver which is to receive the information matches one of the RF receiver in the RF system.

79. An interface in accordance with claim 1 wherein: the processor controls performing of a security check on at least the information which is received by the at least one input to determine if at least the information contained in the electronic mail should be outputted by the at least one output for transmission and broadcast by the RF system.

80. An interface in accordance with claim 79 wherein: the security check is performed by a comparison of an identification of the receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of the receiver which is to receive the information matches one of the RF receivers in the RF system.

81. In a system comprising at least one communication system which transmits electronic mail containing information inputted from a plurality of processors connected to the at least one communication system, a RF system with the RF system having a plurality of receivers and at least one interface connecting the at least one communication system to the RF system with the information contained in the electronic mail being transmitted to one of the at least one interface and from the one interface through the RF system to least one of the plurality of RF receivers which receives broadcasts from the RF system containing the information contained in the electronic mail and an identification of the at least one of the plurality of RF receivers which receives the broadcasts, a method comprising:

combining the identification of each RF receiver to receive a broadcast of the information and the information to be broadcast to each identified RF receiver; and

transmitting at least the combined identification of each RF receiver to receive a broadcast of the information and the information to the one interface.

82. A method in accordance with claim 81 wherein: the combining of the identification of each RF receiver to receive a broadcast of the information and the information to be broadcast to each identified RF receiver occurs at one of the plurality of processors.

83. A method in accordance with claim 82 wherein: the one interface contains a processor; and the processor processes at least the combined identification of a RF receiver and the information to be broadcast to the identified RF receiver and deletes information therefrom with the processed output not containing the deleted information.

84. A method in accordance with claim 83 wherein: the processing deletes a header from the electronic mail with the processed output not containing the deleted header.

36

85. A method in accordance with claim 83 wherein: the processing also adds additional information to the combined identification of the RF receiver and information to be broadcast to the RF receiver with the processed output containing the added information.

86. A method in accordance with claim 84 wherein: the processing also adds additional information to the combined identification of the RF receiver and information to be broadcast to the RF receiver with the processed output containing the added information.

87. A method in accordance with claim 85 wherein: the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

88. A method in accordance with claim 86 wherein: the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

89. A method in accordance with claim 87 wherein: the added information comprises a packet containing the destination to which the processed output is transmitted within the RF system where the broadcast occurs.

90. A method in accordance with claim 88 wherein: the added information comprises a packet containing the destination to which the processed output is transmitted within the RF system where the broadcast occurs.

91. A method in accordance with claim 89 wherein: the packet also contains a destination of a switch in the RF system to which at least part of the packet is transmitted by the RF system.

92. A method in accordance with claim 90 wherein: the packet also contains a destination of a switch in the RF system to which at least part of the packet is transmitted in the RF system.

93. A method in accordance with claim 82 wherein: the one interface contains a processor; and the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

94. A method in accordance with claim 93 wherein: the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

95. A method in accordance with claim 83 wherein: the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

96. A method in accordance with claim 95 wherein: the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

97. A method in accordance with claim 84 wherein: the processor performs a security check to determine if the combined identification of each RF receiver to

37

receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

107. A method in accordance with claim 89 wherein:

6,067,451

39

the processor processes at least the combined identification of a RF receiver and the information to be broadcast to the identified RF receiver and deletes information therefrom with the processed output not containing the deleted information. 5

118. A method in accordance with claim 117 wherein: the processing deletes a header from the electronic mail with the processed output not containing the deleted header.

119. A method in accordance with claim 117 wherein: 10 the processing also adds additional information to the combined identification of the RF receiver and information to be broadcast to the RF receiver with the processed output containing the added information.

120. A method in accordance with claim 118 wherein: 15 the processing also adds additional information to the combined identification of the RF receiver and information to be broadcast to the RF receiver with the processed output containing the added information.

121. A method in accordance with claim 119 wherein: 20 the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

122. A method in accordance with claim 120 wherein: 25 the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

123. A method in accordance with claim 121 wherein: 30 the added information comprises a packet containing the destination to which the processed output is transmitted within the RF system where the broadcast occurs.

124. A method in accordance with claim 122 wherein: 35 the added information comprises a packet containing the destination to which the processed output is transmitted within the RF system where the broadcast occurs.

125. A method in accordance with claim 123 wherein: 40 the packet also contains a destination of a switch in the RF system to which at least part of the packet is transmitted in the RF system.

126. A method in accordance with claim 124, wherein: the packet also contains a destination of a switch in the RF system to which at least part of the packet is transmitted in the RF system.

127. A method in accordance with claim 115 wherein: 45 the one interface contains a processor; and the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system. 50

128. A method in accordance with claim 127 wherein: the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system. 55

129. A method in accordance with claim 116 wherein: the one interface contains a processor; and the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system. 65

40

130. A method in accordance with claim 129 wherein: the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

131. A method in accordance with claim 117 wherein: the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

132. A method in accordance with claim 131 wherein: the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

133. A method in accordance with claim 118 wherein: the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

134. A method in accordance with claim 133 wherein: the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

135. A method in accordance with claim 119 wherein: the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

136. A method in accordance with claim 135 wherein: the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

137. A method in accordance with claim 120 wherein: the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

138. A method in accordance with claim 137 wherein: the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

139. A method in accordance with claim 121 wherein: the processor performs a security check to determine if the combined identification of each RF receiver to

6,067,451

41

receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

140. A method in accordance with claim 139 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

141. A method in accordance with claim 122 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

142. A method in accordance with claim 141 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

143. A method in accordance with claim 123 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

144. A method in accordance with claim 143 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

145. A method in accordance with claim 124 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

146. A method in accordance with claim 145 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

147. A method in accordance with claim 125 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

148. A method in accordance with claim 147 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

42

149. A method in accordance with claim 126 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

150. A method in accordance with claim 149 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

151. A method in accordance with claim 115 wherein:

the one interface contains a processor; and

the processor processes at least the combined identification of a RF receiver and the information to be broadcast to the identified RF receiver and deletes information therefrom with the processed output not containing the deleted information.

152. A method in accordance with claim 151 wherein:

the processing deletes a header from the electronic mail with the processed output not containing the deleted header.

153. A method in accordance with claim 151 wherein:

the processing also adds additional information to the combined identification of the RF receiver and information to be broadcast to the RF receiver with the processed output containing the added information.

154. A method in accordance with claim 152 wherein:

the processing also adds additional information to the combined identification of the RF receiver and information to be broadcast to the RF receiver with the processed output containing the added information.

155. A method in accordance with claim 153 wherein:

the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

156. A method in accordance with claim 154 wherein:

the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

157. A method in accordance with claim 155 wherein:

the added information comprises a packet containing the destination to which the processed output is transmitted within the RF system where the broadcast occurs.

158. A method in accordance with claim 156 wherein:

the added information comprises a packet containing the destination to which the processed output is transmitted within the RF system where the broadcast occurs.

159. A method in accordance with claim 157 wherein:

the packet also contains a destination of a switch in the RF system to which at least part of the packet is transmitted by the RF system.

160. A method in accordance with claim 158 wherein:

the packet also contains a destination of a switch in the RF system to which at least part of the packet is transmitted in the RF system.

161. A method in accordance with claim 151 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.





6,067,451

45

181. A method in accordance with claim 81 wherein:  
the one interface contains a processor; and  
the processor performs a security check to determine if  
the combined identification of each RF receiver to  
receive the broadcast of the information and the infor- 5  
mation should be outputted from the one interface to  
the RF system.

182. A method in accordance with claim 181 wherein:  
the security check is performed by a comparison of an  
identification of each receiver, which is to receive the  
information, with actual identifications of RF receivers  
in the RF system with the processor permitting the  
processed output when a match of each identification of  
the receiver which is to receive the information 15  
matches one of the RF receivers in the RF system.

183. A method in accordance with claim 81 wherein:  
the combining occurs at the one interface.

184. A method in accordance with claim 183 wherein:  
the one interface contains a processor; and 20  
the processor processes at least the combined identifica-  
tion of a RF receiver and the information to be broad-  
cast to the identified RF receiver and deletes informa-  
tion therefrom with the processed output not containing  
the deleted information. 25

185. A method in accordance with claim 184 wherein:  
the processing deletes a header from the electronic mail  
with the processed output not containing the deleted  
header.

186. A method in accordance with claim 184 wherein:  
the processing also adds additional information to the  
combined identification of the RF receiver and infor-  
mation to be broadcast to the RF receiver with the  
processed output containing the added information. 30

187. A method in accordance with claim 185 wherein:  
the processing also adds additional information to the  
combined identification of the RF receiver and infor-  
mation to be broadcast to the RF receiver with the  
processed output containing the added information. 35

188. A method in accordance with claim 186 wherein:  
the added information is a destination to which the  
processed output is transmitted within the RF system  
where the broadcast occurs.

189. A method in accordance with claim 187 wherein: 45  
the added information is a destination to which the  
processed output is transmitted within the RF system  
where the broadcast occurs.

190. A method in accordance with claim 188 wherein:  
the added information comprises a packet containing the  
destination to which the processed output is transmitted  
within the RF system where the broadcast occurs. 50

191. A method in accordance with claim 189 wherein:  
the added information comprises a packet containing the  
destination to which the processed output is transmitted  
within the RF system where the broadcast occurs. 55

192. A method in accordance with claim 190 wherein:  
the packet also contains a destination of a switch in the RF  
system to which at least part of the packet is transmitted  
in the RF system. 60

193. A method in accordance with claim 191 wherein:  
the packet also contains a destination of a switch in the RF  
system to which at least part of the packet is transmitted  
in the RF system. 65

194. A method in accordance with claim 183 wherein:  
the one interface contains a processor; and

46

the processor performs a security check to determine if  
the combined identification of each RF receiver to  
receive the broadcast of the information and the infor-  
mation should be outputted from the one interface to  
the RF system.

195. A method in accordance with claim 194 wherein:  
the security check is performed by a comparison of an  
identification of each receiver, which is to receive the  
information, with actual identifications of RF receivers  
in the RF system with the processor permitting the  
processed output when a match of the identification of  
each receiver which is to receive the information  
matches one of the RF receivers in the RF system.

196. A method in accordance with claim 184 wherein:  
the processor performs a security check to determine if  
the combined identification of each RF receiver to  
receive the broadcast of the information and the infor-  
mation should be outputted from the one interface to  
the RF system.

197. A method in accordance with claim 196 wherein:  
the security check is performed by a comparison of an  
identification of each receiver, which is to receive the  
information, with actual identifications of RF receivers  
in the RF system with the processor permitting the  
processed output when a match of the identification of  
each receiver which is to receive the information  
matches one of the RF receivers in the RF system.

198. A method in accordance with claim 185 wherein:  
the processor performs a security check to determine if  
the combined identification of each RF receiver to  
receive the broadcast of the information and the infor-  
mation should be outputted from the one interface to  
the RF system.

199. A method in accordance with claim 198 wherein:  
the security check is performed by a comparison of an  
identification of each receiver, which is to receive the  
information, with actual identifications of RF receivers  
in the RF system with the processor permitting the  
processed output when a match of the identification of  
each receiver which is to receive the information  
matches one of the RF receivers in the RF system.

200. A method in accordance with claim 186 wherein:  
the processor performs a security check to determine if  
the combined identification of each RF receiver to  
receive the broadcast of the information and the infor-  
mation should be outputted from the one interface to  
the RF system.

201. A method in accordance with claim 200 wherein:  
the security check is performed by a comparison of an  
identification of each receiver, which is to receive the  
information, with actual identifications of RF receivers  
in the RF system with the processor permitting the  
processed output when a match of the identification of  
each receiver which is to receive the information  
matches one of the RF receivers in the RF system.

202. A method in accordance with claim 187 wherein:  
the processor performs a security check to determine if  
the combined identification of each RF receiver to  
receive the broadcast of the information and the infor-  
mation should be outputted from the one interface to  
the RF system.

203. A method in accordance with claim 202 wherein:  
the security check is performed by a comparison of an  
identification of each receiver, which is to receive the  
information, with actual identifications of RF receivers  
in the RF system with the processor permitting the

6,067,451

47

processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

204. A method in accordance with claim 188 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

205. A method in accordance with claim 204 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

206. A method in accordance with claim 189 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

207. A method in accordance with claim 206 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

208. A method in accordance with claim 190 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

209. A method in accordance with claim 208 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

210. A method in accordance with claim 208 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

211. A method in accordance with claim 210 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

212. A method in accordance with claim 191 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

48

213. A method in accordance with claim 212 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

214. A method in accordance with claim 192 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

215. A method in accordance with claim 214 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

216. A method in accordance with claim 193 wherein:

the processor performs a security check to determine if the combined identification of each RF receiver to receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

217. A method in accordance with claim 216 wherein:

the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

218. A method in accordance with claim 81 wherein:

the one interface contains a processor; and

the processor processes at least the combined identification of a RF receiver and the information to be broadcast to the identified RF receiver and deletes information therefrom with the processed output not containing the deleted information.

219. A method in accordance with claim 218 wherein:

the processing deletes a header from the electronic mail with the processed output not containing the deleted header.

220. A method in accordance with claim 218 wherein:

the processing also adds additional information to the combined identification of the RF receiver and information to be broadcast to the RF receiver with the processed output containing the added information.

221. A method in accordance with claim 219 wherein:

the processing also adds additional information to the combined identification of the RF receiver and information to be broadcast to the RF receiver with the processed output containing the added information.

222. A method in accordance with claim 220 wherein:

the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.

223. A method in accordance with claim 221 wherein:

the added information is a destination to which the processed output is transmitted within the RF system where the broadcast occurs.





6,067,451

51

receive the broadcast of the information and the information should be outputted from the one interface to the RF system.

245. A method in accordance with claim 244 wherein: the security check is performed by a comparison of an identification of each receiver, which is to receive the information, with actual identifications of RF receivers in the RF system with the processor permitting the processed output when a match of the identification of each receiver which is to receive the information matches one of the RF receivers in the RF system.

246. In a system comprising a communication system which transmits electronic mail containing information, with the electronic mail being inputted to the communication system from a plurality of processors, a RF system and an interface connecting the communication system to the RF system with the information contained in the electronic mail and an identification of a RF device in the RF system being transmitted from the interface to the RF system and broadcast by the RF system to an identified RF device, the identified RF device comprising:

a RF receiver, which receives the information when the identification of the device is detected in a broadcast by the RF system to the RF receiver; and

a memory, coupled to the RF receiver, which stores the information received by the RF receiver contained in the electronic mail inputted to the communication system.

247. The RF device in accordance with claim 246 further comprising:

a processor, coupled to the memory, which after the information has been outputted from the memory, processes the information.

248. The RF device in accordance with claim 247 further comprising:

at least one application program, executed by the processor, which processes the information.

249. The RF device in accordance with claim 246 further comprising:

a display which displays the information.

250. A method of transmitting information contained in electronic mail with a communication system and a RF system with the RF system broadcasting the information to a RF receiver with the RF system being connected to the communication system by at least one interface comprising:

inputting electronic mail from a processor to the communication system with the electronic mail including at least the information to be broadcast to the RF receiver; receiving with one of the at least one interface at least the information to be broadcast to the RF receiver;

transmitting a processed output including at least the information and an identification of the RF receiver to receive the information from the one interface to a broadcast location in the RF system;

broadcasting the information and the identification of the RF receiver with the RF system from the broadcast location; and

receiving the broadcast information and the identification of the RF receiver with the RF receiver.

251. A method in accordance with claim 250 wherein: the electronic mail inputted by the processor to the communication system comprises the information, the identification of the RF receiver and an address of the one interface; and

the communication system transmits the electronic mail to the one interface.

52

252. A method in accordance with claim 251 wherein: the one interface comprises a processor; and

the processor processes information received by the one interface and deletes information from the received information with the processed output not containing the deleted information.

253. A method in accordance with claim 252 wherein: the processing deletes a header from information received by the one interface with the processed output not containing the deleted header.

254. A method in accordance with claim 252 wherein: the processor also adds additional information to the information received by the one interface with the processed output containing the added information.

255. A method in accordance with claim 253 wherein: the processor also adds additional information to the information received by the one interface with the processed output containing the added information.

256. A method in accordance with claim 254 wherein: the added information is a packet.

257. A method in accordance with claim 256 wherein: at least part of the packet is transmitted by the RF system and broadcast to the RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

258. A method in accordance with claim 255 wherein: the added information is a packet.

259. A method in accordance with claim 258 wherein: at least part of the packet is transmitted by the RF system and broadcast to the RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

260. A method in accordance with claim 259 wherein: at least part of the packet is transmitted by the RF system and broadcast to the RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

261. A method in accordance with claim 251 wherein: the one interface comprises a processor; and

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

262. A method in accordance with claim 252 wherein: the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

263. A method in accordance with claim 253 wherein: the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output

6,067,451

53

when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

264. A method in accordance with claim 254 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

265. A method in accordance with claim 255 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

266. A method in accordance with claim 256 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

267. A method in accordance with claim 257 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

268. A method in accordance with claim 258 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

269. A method in accordance with claim 259 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

270. A method in accordance with claim 260 wherein:

the processor processes the information received by the one interface and performs a security check on infor-

54

mation received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

271. A method in accordance with claim 251 further comprising:

storing the information received by the RF receiver in a memory; and

processing the information stored in the memory with an application program executed by a processor coupled to the RF memory.

272. A method in accordance with claim 250 wherein:

the communication system combines the information and the identification of RF receiver and transmits the combined information and the identification of the RF receiver to the one interface.

273. A method in accordance with claim 272 wherein:

the one interface comprises a processor; and

the processor processes information received by the one interface and deletes information from the received information with the processed output not containing the deleted information.

274. A method in accordance with claim 273 wherein:

the processing deletes a header from information received by the one interface with the processed output not containing the deleted header.

275. A method in accordance with claim 273 wherein:

the processor also adds additional information to the information received by the one interface with the processed output containing the added information.

276. A method in accordance with claim 274 wherein:

the processor also adds additional information to the information received by the one interface with the processed output containing the added information.

277. A method in accordance with claim 275 wherein:

the added information is a packet.

278. A method in accordance with claim 277 wherein:

at least part of the packet is transmitted by the RF system and broadcast to the RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

279. A method in accordance with claim 276 wherein:

the added information is a packet.

280. A method in accordance with claim 272 wherein:

the one interface comprises a processor; and

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

281. A method in accordance with claim 273 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to

6,067,451

55

receive the information matches one of the RF receivers in the RF system.

282. A method in accordance with claim 274 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

283. A method in accordance with claim 275 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

284. A method in accordance with claim 276 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

285. A method in accordance with claim 277 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

286. A method in accordance with claim 278 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

287. A method in accordance with claim 279 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

288. A method in accordance with claim 272 further comprising:

storing the information received by the RF receiver in a memory; and

56

processing the information stored in the memory with an application program executed by a processor coupled to the RF memory.

289. A method in accordance with claim 250 wherein:

the one interface comprises a processor; and

the processor processes information received by the one interface and deletes information from the received information with the processed output not containing the deleted information.

290. A method in accordance with claim 289 wherein:

the processing deletes a header from information received by the one interface with the processed output not containing the deleted header.

291. A method in accordance with claim 289 wherein:

the processor also adds additional information to the information received by the one interface with the processed output containing the added information.

292. A method in accordance with claim 290 wherein:

the processor also adds additional information to the information received by the one interface with the processed output containing the added information.

293. A method in accordance with claim 291 wherein:

the added information is a packet.

294. A method in accordance with claim 293 wherein:

at least part of the packet is transmitted by the RF system and broadcast to the RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

295. A method in accordance with claim 292 wherein:

the added information is a packet.

296. A method in accordance with claim 295 wherein:

at least part of the packet is transmitted by the RF system and broadcast to the RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

297. A method in accordance with claim 289 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

298. A method in accordance with claim 290 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

299. A method in accordance with claim 291 wherein:

the processor processes the information received by the one interface and performs a security check on information received by the one interface by performing a comparison of the identification of the RF receiver with permissible identifications of RF receivers in the RF system with the processor providing a processed output when a match of the identification of the RF receiver to receive the information matches one of the RF receivers in the RF system.

6,067,451

57

300. A method in accordance with claim 292 wherein:  
the processor processes the information received by the  
one interface and performs a security check on infor-  
mation received by the one interface by performing a  
comparison of the identification of the RF receiver with  
permissible identifications of RF receivers in the RF  
system with the processor providing a processed output  
when a match of the identification of the RF receiver to  
receive the information matches one of the RF receivers  
in the RF system.

301. A method in accordance with claim 293 wherein:  
the processor processes the information received by the  
one interface and performs a security check on infor-  
mation received by the one interface by performing a  
comparison of the identification of the RF receiver with  
permissible identifications of RF receivers in the RF  
system with the processor providing a processed output  
when a match of the identification of the RF receiver to  
receive the information matches one of the RF receivers  
in the RF system.

302. A method in accordance with claim 294 wherein:  
the processor processes the information received by the  
one interface and performs a security check on infor-  
mation received by the one interface by performing a  
comparison of the identification of the RF receiver with  
permissible identifications of RF receivers in the RF  
system with the processor providing a processed output  
when a match of the identification of the RF receiver to  
receive the information matches one of the RF receivers  
in the RF system.

303. A method in accordance with claim 395 wherein:  
the processor processes the information received by the  
one interface and performs a security check on infor-  
mation received by the one interface by performing a  
comparison of the identification of the RF receiver with  
permissible identifications of RF receivers in the RF  
system with the processor providing a processed output  
when a match of the identification of the RF receiver to  
receive the information matches one of the RF receivers  
in the RF system.

304. A method in accordance with claim 296 wherein:  
the processor processes the information received by the  
one interface and performs a security check on infor-  
mation received by the one interface by performing a  
comparison of the identification of the RF receiver with  
permissible identifications of RF receivers in the RF  
system with the processor providing a processed output  
when a match of the identification of the RF receiver to  
receive the information matches one of the RF receivers  
in the RF system.

305. A method in accordance with claim 290 further  
comprising:  
storing the information received by the RF receiver in a  
memory; and  
processing the information stored in the memory with an  
application program executed by a processor coupled to  
the RF memory.

306. A method in accordance with claim 291 further  
comprising:  
storing the information received by the RF receiver in a  
memory; and  
processing the information stored in the memory with an  
application program executed by a processor coupled to  
the RF memory.

58

307. A method in accordance with claim 297 further  
comprising:  
storing the information received by the RF receiver in a  
memory; and  
processing the information stored in the memory with an  
application program executed by a processor coupled to  
the RF memory.

308. A method in accordance with claim 250 wherein:  
the one interface comprises a processor; and  
the processor processes the information received by the  
one interface and performs a security check on infor-  
mation received by the one interface by performing a  
comparison of the identification of the RF receiver with  
permissible identifications of RF receivers in the RF  
system with the processor providing a processed output  
when a match of the identification of the RF receiver to  
receive the information matches one of the RF receivers  
in the RF system.

309. A method in accordance with claim 308 further  
comprising:  
storing the information received by the RF receiver in a  
memory; and  
processing the information stored in the memory with an  
application program executed by a processor coupled to  
the RF memory.

310. A method in accordance with claim 250 further  
comprising:  
storing the information received by the RF receiver in a  
memory; and  
processing the information stored in the memory with an  
application program executed by a processor coupled to  
the RF memory.

311. A method of transmitting and distributing inputted  
information through a distributed system, comprising:  
originating electronic mail from a processor in a commu-  
nication system which electronic mail includes (a) an  
address of an interface which connects the communi-  
cation system to a RF system to which the electronic  
mail is delivered by the communication system in  
response to the address in the electronic mail, (b) an  
identification of a RF receiver in the RF system to  
receive the inputted information, and (c) the inputted  
information to be delivered to the RF receiver;  
receiving the originated electronic mail at the interface  
which connects the communication system to the RF  
system;  
adding information to the inputted information and the  
identification of the at least one designated RF receiver  
to facilitate transmission of the inputted information  
and the identification to the RF receiver;  
broadcasting the inputted information and the identifica-  
tion of the RF receiver from at least one broadcast  
location to the RF receiver;  
receiving the broadcasted inputted information and the  
identification of the RF receiver with the RF receiver;  
and  
storing the received inputted broadcast information in a  
memory and processing the information stored in the  
memory with an application program executed by  
another processor coupled to the memory.

312. A method in accordance with claim 311 wherein:  
a header, added by the processor in the communication  
system, is deleted from the electronic mail prior to  
broadcasting of the inputted information and the iden-  
tification of the RF receiver.



6,067,451

59

313. A method in accordance with claim 311 wherein:  
the identification of the RF receiver is compared with  
permissible identification numbers in the RF system to  
determine if the inputted information and the identifica- 5  
tion of the RF receiver should be transmitted by the  
RF system to the RF receiver.

314. A method in accordance with claim 313 wherein:  
a header, added by the processor in the communication  
system, is deleted from the electronic mail prior to  
broadcasting of the inputted information and the identifica- 10  
tion of the RF receiver to the RF receiver.

315. A method in accordance with claim 311 wherein:  
the inputted information and the identification of the RF  
receiver are transmitted by the RF system and broad- 15  
cast to RF receiver at a location in the RF system which  
is determined by the RF system processing information  
stored in the RF system.

316. A method in accordance with claim 312 wherein:  
the inputted information and the identification of the RF 20  
receiver are transmitted by the RF system and broad-  
cast to RF receiver at a location in the RF system which  
is determined by the RF system processing information  
stored in the RF system.

317. A method in accordance with claim 313 wherein: 25  
the inputted information and the identification of the RF  
receiver are transmitted by the RF system and broad-  
cast to RF receiver at a location in the RF system which  
is determined by the RF system processing information  
stored in the RF system.

318. A method in accordance with claim 314 wherein:  
the inputted information and the identification of the RF 30  
receiver are transmitted by the RF system and broad-  
cast to RF receiver at a location in the RF system which  
is determined by the RF system processing information  
stored in the RF system.

319. A method of transmitting and distributing inputted  
information through a communication system and an RF  
system, comprising:  
transmitting electronic mail from a processor in the com- 40  
munication system, which electronic mail includes (a)  
an address in the communication system of an interface  
to which the electronic mail is delivered by the com-  
munication system in response to the address in the  
electronic mail, (b) an identification of a RF receiver in 45  
the RF system to receive the inputted information, and  
(c) the information to be received by the RF receiver;  
receiving the transmitted electronic mail at the interface  
and transmitting at least the inputted information and  
the identification of the RF receiver to the RF system; 50  
broadcasting the inputted information and the identifica-  
tion of the RF receiver with the RF system;  
receiving the inputted information and the identification  
of the RF receiver with the RF receiver; and 55  
storing the received inputted broadcast information in a  
memory and processing the information stored in the  
memory with an application program executed by  
another processor coupled to the memory.

320. A method in accordance with claim 319 wherein: 60  
a header, added by the processor in the communication  
system, is deleted from the electronic mail prior to broad-  
casting of the inputted information and the identification of  
the RF receiver.

321. A method in accordance with claim 319 wherein: 65  
the identification of the RF receiver is compared with  
permissible identification numbers in the RF system to

60

determine if the inputted information and the identifica-  
tion of the RF receiver should be transmitted by the  
RF system to the RF receiver.

322. A method in accordance with claim 321 wherein:  
a header, added by the processor in the communication  
system, is deleted from the electronic mail prior to  
broadcasting of the inputted information and the identifica-  
tion of the RF receiver to the RF receiver.

323. A method in accordance with claim 319 wherein:  
the inputted information and the identification of the RF  
receiver are transmitted by the RF system and broad-  
cast to RF receiver at a location in the RF system which  
is determined by the RF system processing information  
stored in the RF system.

324. A method in accordance with claim 322 wherein:  
the inputted information and the identification of the RF  
receiver are transmitted by the RF system and broad-  
cast to RF receiver at a location in the RF system which  
is determined by the RF system processing information  
stored in the RF system.

325. A method in accordance with claim 323 wherein:  
the inputted information and the identification of the RF  
receiver are transmitted by the RF system and broad-  
cast to RF receiver at a location in the RF system which  
is determined by the RF system processing information  
stored in the RF system.

326. In a system for transmitting and distributing inputted  
information, contained in electronic mail originating at a  
processor in a communication system, through a RF system  
which electronic mail includes (a) an address in the com-  
munication system to which the electronic mail is delivered  
by the communication system in response to the address in  
the communication system, (b) an identification of a RF  
receiver in the RF system to receive the inputted information  
and (c) the inputted information to be received by the RF  
receiver, the method comprising:  
providing an interface connecting the communication  
system to the RF system which is the address in the  
communication system to which electronic mail is  
delivered by the communication system;  
processing the electronic mail after being received at the  
interface from the communication system and trans-  
mitting at least the inputted information and the identifica-  
tion of the RF receiver to the RF system;  
transmitting the identification of the at least one RF  
receiver and the inputted information to at least one  
broadcast location in the RF system;  
broadcasting the inputted information and the identifica-  
tion of the RF receiver from the at least one broadcast  
location to the RF receiver; and  
storing the received inputted information in a memory and  
processing the information stored in the memory with  
an application program executed by another processor  
coupled to the memory.

327. A method in accordance with claim 326 wherein:  
the identification of the RF receiver to which the inputted  
information and the identification of the RF receiver is  
to be broadcasted is verified to determine if the inputted  
information and the identification of the RF receiver  
should be transmitted by the RF system to the RF  
receiver.

328. A method in accordance with claim 326 wherein:  
a header is deleted from the electronic mail prior to  
broadcasting of the inputted information and the identifica-  
tion of the RF receiver to the RF receiver.

6,067,451

61

329. A method in accordance with claim 326 wherein:

the identification of the RF receiver is compared with permissible identification numbers of RF receivers in the RF system to determine if the inputted information and the identification of the RF receiver should be transmitted by the RF system to the RF receiver.

330. A method in accordance with claim 326 wherein:

the inputted information and the identification of the RF receiver are transmitted by the RF system and broadcast to RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

331. A method in accordance with claim 327 wherein:

the inputted information and the identification of the RF receiver are transmitted by the RF system and broadcast to RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

332. In a system for transmitting and distributing inputted information contained in electronic mail originating from a communication system and transmitted through an interface to a RF system which broadcasts at least the inputted information and an identification of a RF receiver to the RF receiver with the interface being a destination in the communication system to which electronic mail is delivered by the communication system in response to an address of the destination in the electronic mail and at least the inputted information and the identification of the RF receiver are transmitted from the interface to the RF system, are transmitted by the RF system to at least one broadcast location in the RF system and are broadcasted from the at least one broadcast location to the RF receiver, the method comprising:

connecting a processor to the communication system;

originating the electronic mail at the processor with the electronic mail including (a) the address of the destination to which the electronic mail is delivered by the communication system, (b) the identification of the RF receiver, and (c) the inputted information to be received by the RF receiver; and

storing received broadcasted information in a memory and processing the information stored in the memory with an application program executed by another processor coupled to the memory.

333. A method in accordance with claim 332 wherein:

the identification of the RF receiver is compared with permissible identification numbers of RF receivers in the RF system to determine if at least the inputted information and the identification of the RF receiver should be transmitted by the RF system to the RF receiver.

62

334. A method in accordance with claim 333 wherein:

information is combined with the inputted information which is used by the RF system during transmission of at least the identification of the RF receiver and the inputted information to the at least one broadcast location where at least the inputted information and the identification of the RF receiver are broadcasted to the RF receiver.

335. A method in accordance with claim 332 wherein:

a header is deleted from the electronic mail and then at least the inputted information and the identification of the RF receiver are broadcasted from the at least one broadcast location to the RF receiver.

336. A method in accordance with claim 335 wherein:

information is combined with the inputted information which is used by the RF system during transmission of at least the identification of the RF receiver and the inputted information to the at least one broadcast location where at least the inputted information and the identification of the RF receiver are broadcasted to the RF receiver.

337. A method in accordance with claim 332 wherein:

the inputted information and the identification of the RF receiver are transmitted by the RF system and broadcast to RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

338. A method in accordance with claim 333 wherein:

the inputted information and the identification of the RF receiver are transmitted by the RF system and broadcast to RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

339. A method in accordance with claim 334 wherein:

the inputted information and the identification of the RF receiver are transmitted by the RF system and broadcast to RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

340. A method in accordance with claim 335 wherein:

the inputted information and the identification of the RF receiver are transmitted by the RF system and broadcast to RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

341. A method in accordance with claim 336 wherein:

the inputted information and the identification of the RF receiver are transmitted by the RF system and broadcast to RF receiver at a location in the RF system which is determined by the RF system processing information stored in the RF system.

\* \* \* \* \*